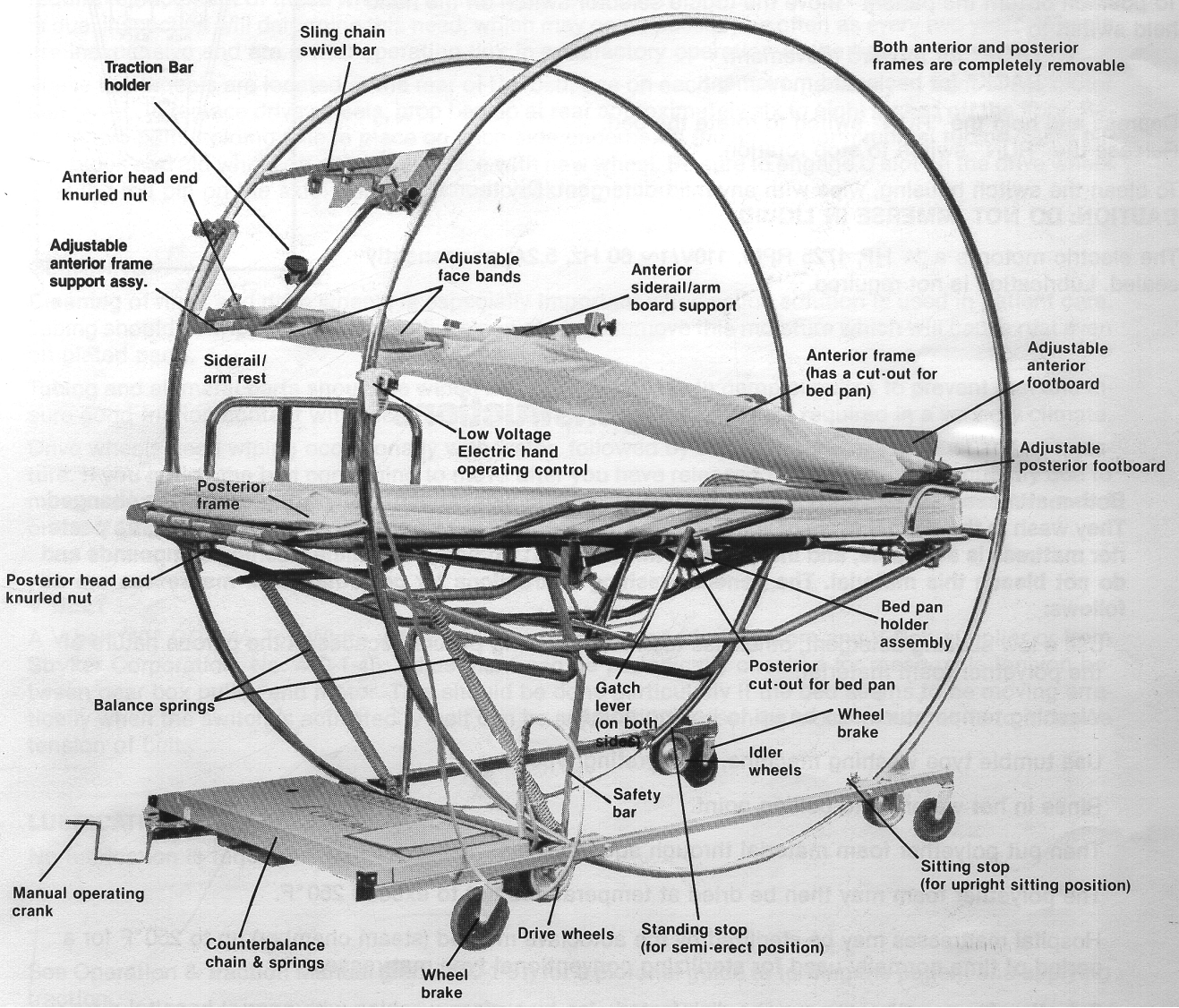
stryker®

Maintenance Manual

And Replacement Parts List

IMPORTANT
File in your maintenance records

460 Circle Bed Features



460 CircOlectric® Bed — Parts List & Instructions

The Electrical Drive

SWITCH
The hand held electric switch controls the mechanical drive which rotates the large diameter rings to position the patient.

CAUTION: DO NOT DROP the hand held switch on a hard surface, breakage or malfunction could occur.

A low voltage electrical circuit for the hand held switch has been utilized since 1974.

A toggle on/off switch on the face of the low voltage control box will cause the hand held switch to be inoperative.

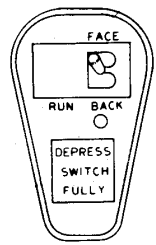
The hand held switch should be clamped onto the turning ring when not in use.

CSA STANDARD
NORME
C22.2 No. 125

RISK CLASS 2 G CATEGORIES DE RISQUES
100 µa

1/4HP 115V 60~ 5.2A
6 Volt Hand Control

Hand Held Switch



OPERATING THE HAND HELD SWITCH
To position or turn the patient - move the toggle selector switch on the hand held switch to—
"FACE" for forward movement.
"BACK" for backward movement.

Depress and hold the "RUN" switch to rotate the bed.
Release the "RUN" switch to stop rotation.

To clean the switch housing, wipe with any mild detergent. Dry thoroughly.
CAUTION: DO NOT IMMERSE IN LIQUID.

The electric motor is a ¼ HP, 1725 RPM, 110V/1~ 60 Hz, 5.2A, permanently sealed. Lubrication is not required.

Washing Instructions

1. Mattress:

Both mattresses are polyether foam (not rubber) and can be changed easily when sheets are changed. They wash in the normal cycle of your laundry equipment. They can also be autoclaved. An extra posterior mattress is advisable, and inexpensive. IMPORTANT: Do not use alkaline washing compounds and do not bleach this material. The general washing instructions for polyether foam mattresses are as follows:

Use a low sudsing detergent, otherwise too much foaming occurs because of the porous nature of the polyether foam material.

Washing temperature can be up to boiling point.

Use tumble type washing machine, not gyrating type.

Rinse in hot water up to boiling point.

Then put polyether foam material through squeeze rolls.

The polyether foam may then be dried at temperatures not to exceed 250°F.

Hospital mattresses may be sterilized by the autoclave method (steam chamber) up to 250°F for a period of time normally used for sterilizing conventional type mattresses.

Polyether foam mattresses may be disinfected also by surface washing with normal hospital disinfectant solutions.

2. **Plastic Mattress Protectors:**

   Posterior Frame Cover:

   DO NOT LAUNDER. The chemicals used in the normal hospital laundry will cause the material to shrink excessively to become somewhat brittle.

   It is recommended that a clear antiseptic solution be used to cleanse the plastic covers. This can be done on the bed in most cases.

Maintenance Instructions For The CircOlectric® Bed

Very little maintenance is required due to simple construction. A few basic suggestions will be helpful in maintaining trouble-free service.

DRIVE WHEELS

If the bed rotates erratically, the difficulty may be in the V belt adjustment or because of worn out drive wheels. Chemicals in solution all of which come in contact with the wheels, and/or age, will eventually require replacement of these wheels. If the rubber feels sticky or mushy or extremely hard, replacement is due. Inspection will determine this need, which may occur possibly as often as every two years. Wheels are inexpensive and are a vital operating link in satisfactory operation of the bed.

These two wheels are located at the rear of the bed, one on each side immediately in front of the motor pan cover. To replace drive wheels, prop bed up at rear approximately six to eight inches off the floor. Remove two bolts holding axle in place on each side underneath the square longitudinal tubing. Slide pillow block and old wheel off axle and replace with new wheel. Be sure to engage U slot on the drive wheel over the roll pin on the axle. Replace pillow block and bolts.

CLEANING

Cleaning of rings and drive wheels is especially **important** when saline solution is used in patient care. Tubing should be wiped frequently with a clean cloth, to remove this moisture which will cause rust even on plated parts.

Tubing and all metal parts should be wiped dry more frequently in damp climates to prevent rust and insure good friction contact with the drive wheels than would ordinarily be required in a very dry climate.

Drive wheels need wiping occasionally with water, followed by a dry cloth to remove dust and/or moisture. If you notice the bed continuing to move after you have released the switch, it is frequently due to moisture on rings or drive wheels. If this does not solve the problem, either new drive wheels are needed or the V belt requires adjustment.

V BELT

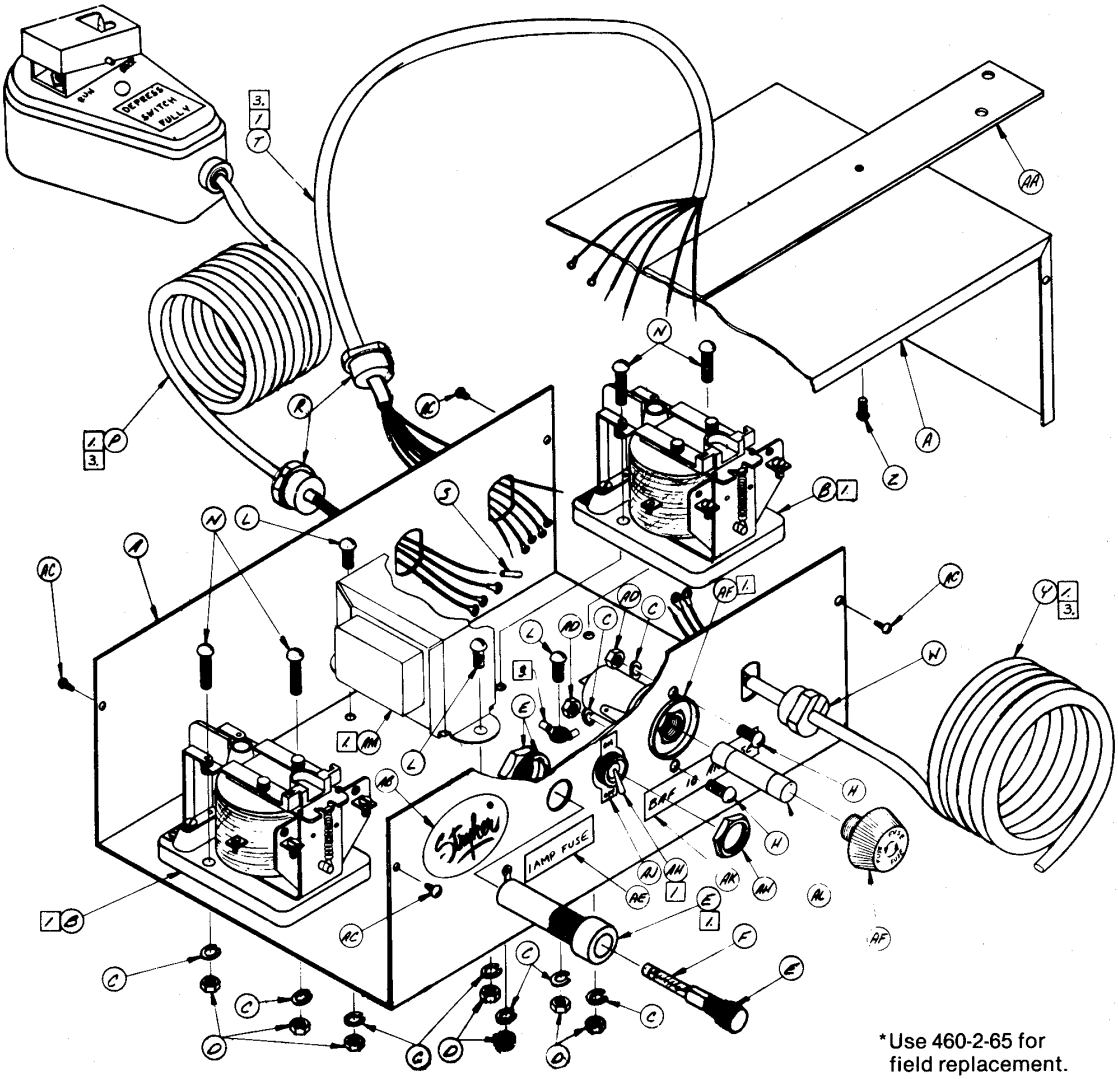
A V belt (40″ OD x ½ Top Width x 42° Angle) can be obtained locally from any V Belt supplier or from Stryker Corporation, No. 460-1-45. Adjustment can be periodically checked for reasonable tension between gear box pulley and motor. This should be done particularly if the bed seems to be moving erratically when the switch is activated. V belt can be adjusted by loosening motor mount bolts to increase tension of belt.

LUBRICATION

No lubrication is required.

See Operation & Traction Manual (part #460-1-91) for a pictorial guide to turning the patient and applying traction.

Low Voltage Control No. 460-2-92*

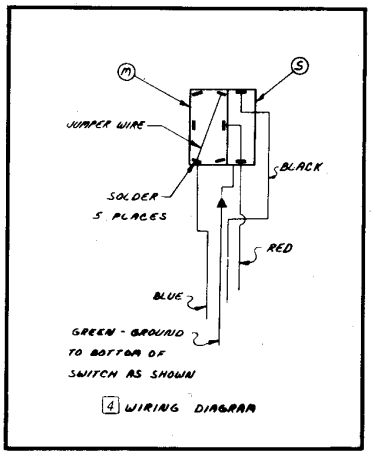


*Use 460-2-65 for field replacement.

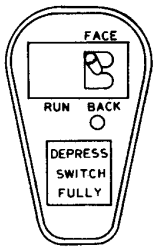
ITEM	PART NAME	PART NO.
A		
B	RELAY	460-2-51
C	LOCK WASHER #10	12-6
D	HEX NUT #10-32	15-4
E	FUSEHOLDER	460-2-53
F	MINATURE FUSE (1 AMP)	460-2-54
H	RD. HD. MACH. SCR. (8-32 x ½)	2-31
J	BOX - TOP	460-2-147
K	BOX - BOTTOM	460-2-148
L	RD. HD. MACH. SCR. (#10-32 3/8)	2-17
M	PLASTIC ENCASED CORD TAG	280-4-97
N	RD. HD. MACH. SCR. (#10-32 5/8)	2-19
P	SWITCH & CABLE ASSY	460-2-74
R	STRAIN RELIEF	34-11
S	SOLDERLESS CONNECTOR	34-1
T	MOTOR RELAY CORD ASSY	460-2-98
W	STRAIN RELIEF	34-14
Y	SOURCE CORD ASSY	460-2-68
Z	RD. HD. MACH. SCR.	2-34
AA	MOUNTING PLATE	460-2-58
	WIRE ASSY (WHITE)	460-2-110
	WIRE ASSY (BLACK)	460-2-112
	WIRE ASSY (WHITE)	460-2-122
AB	NAMEPLATE	1407-1-22
AC	SHEET METAL SCR #6-32 x 3/8	23-8
AD	HEX. NUT (#8-32)	15-2
AE	LABEL - FUSE (1-AMP)	460-2-78
AF	FUSEHOLDER	460-2-82
AH	TOGGLE SWITCH	460-2-94
AJ	INDICATING PLATE	460-2-95
AK	LABEL (10 AMP FUSE)	460-2-103
AL	FUSE	460-2-102
AM	TRANSFORMER ASSY	460-2-145
	WIRE ASSY (BLACK)	460-2-116
	WIRE ASSY (RED)	460-2-118
	WIRE (BLACK)	460-2-119

Note — Not all items identified are saleable.

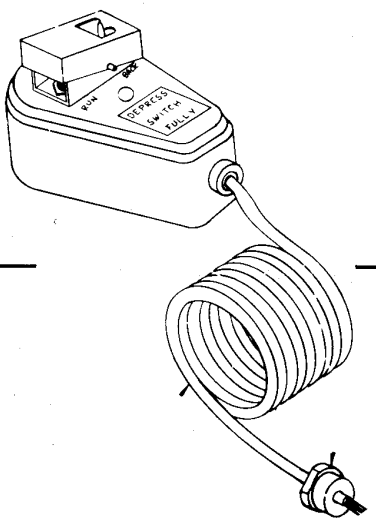
460-2-74
Low Voltage Controller Switch & Cable Assembly 4 Leads

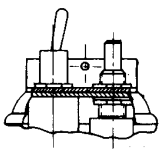


4 WIRING DIAGRAM

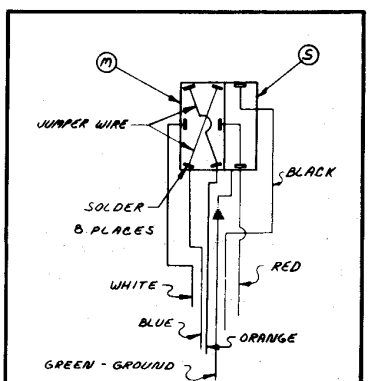


Low Voltage Hand Switch




SWITCH ASS'Y.

460-2-28
115/1/60
Direct Drive
6 Leads
Replacement Only



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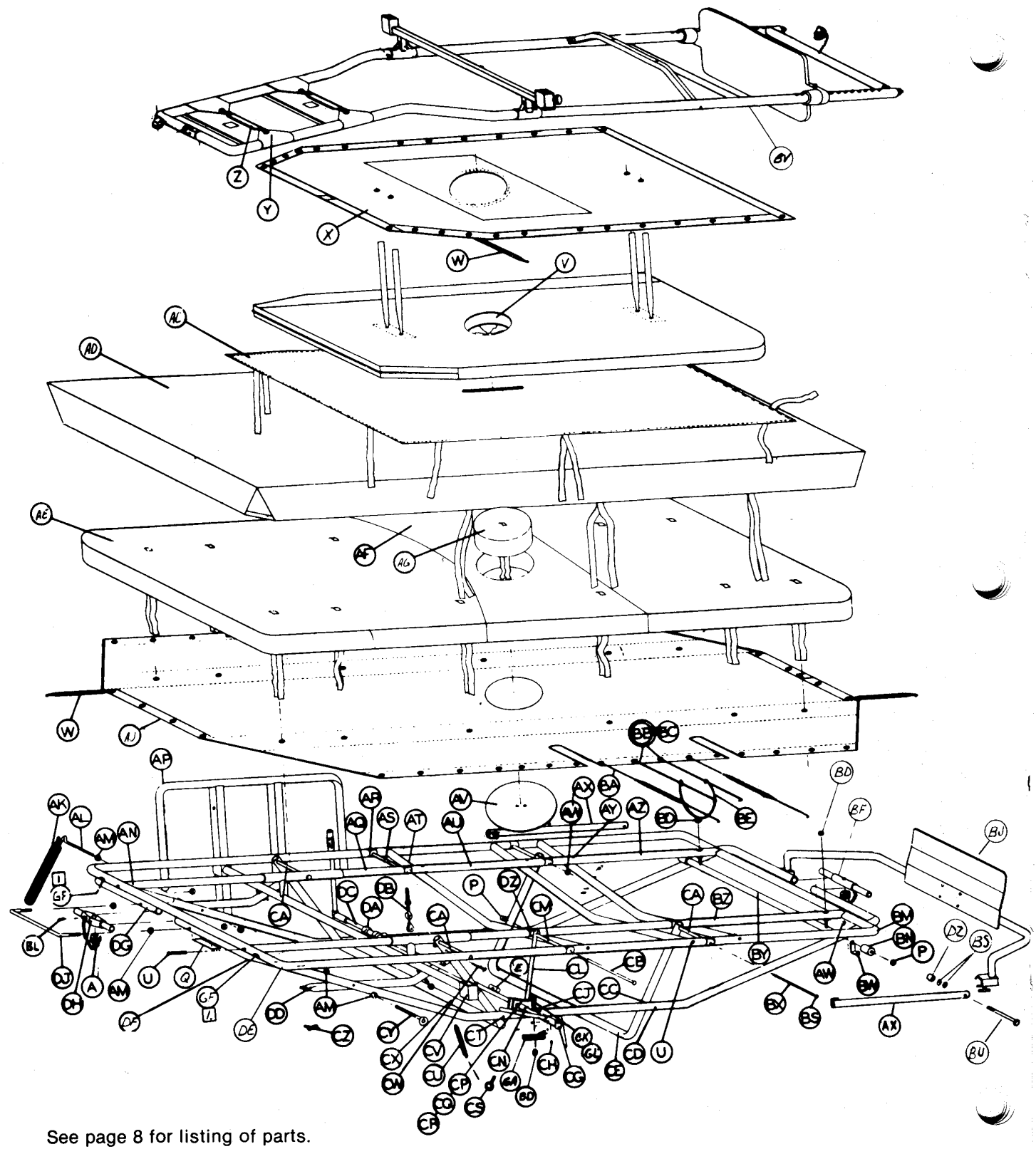
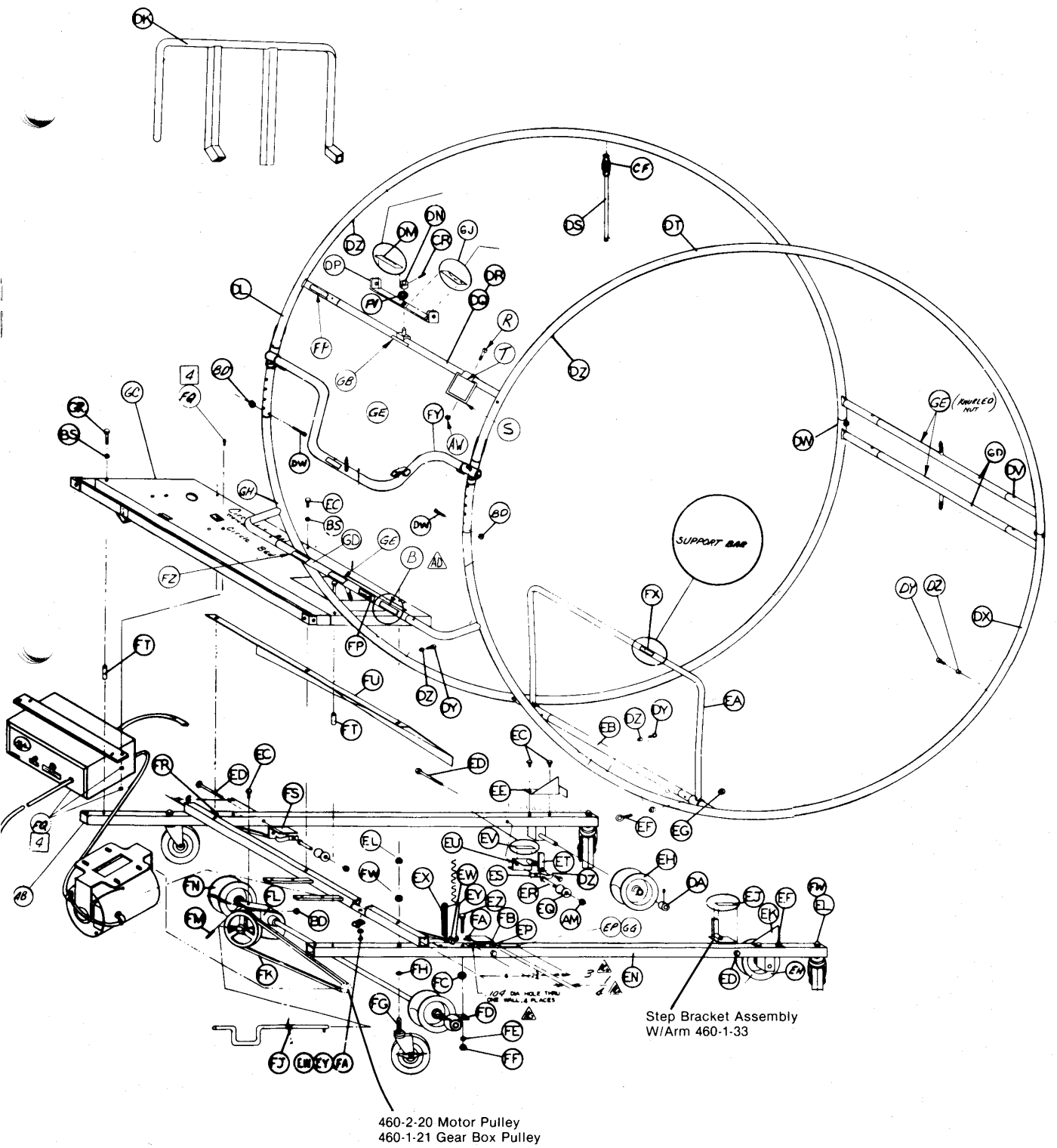


See page 8 for listing of parts.

Not all items identified are saleable.


SUPPORT BAR
Step Bracket Assembly
W/Arm 460-1-33
460-2-20 Motor Pulley
460-1-21 Gear Box Pulley

REPLACEMENT PARTS

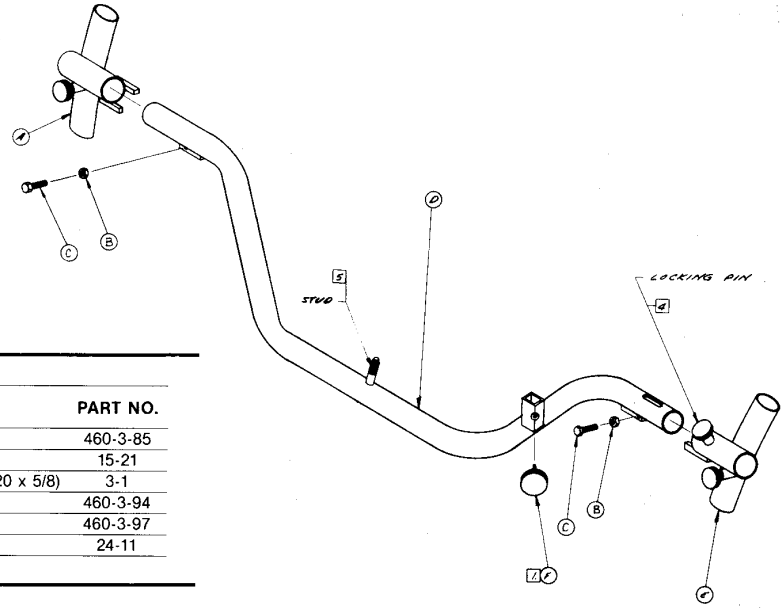
FOR MODEL 460 CIRCOLECTRIC® BED MANUFACTURED AFTER JANUARY 1, 1975

LETTER	DESCRIPTION	460 PART NO.
A	Captive Knurled Nut	460-4-165
E	Tube Nut	460-4-13
P	Nut 1/4 - Drive	17-3
B	Label	460-4-103
Q	Label	460-4-104
R	Cap Screw (1/4-20 x 1½)	3-5
S	Label Holder	460-4-109
T	Label	460-4-106
U	Mach. Screw 1/4-20	2-25
V	Anterior Mattress	460-5-121
W	Short Spring	38-4
X	Anterior Canvas	460-5-115
Y	Hd. Support Band	100-5-8
Z	Elastic Band Assembly	38-40
AB	Hole Plug	37-15
AC	Anterior Sheet	460-5-118
AD	Posterior Sheet	460-4-70
AE	Posterior Mattress & Ties	460-4-72
AF	Partial Posterior Mattress Prot.	460-641
AG	Center Plug	460-4-82
AH*	Plug Cover	460-4-81
AJ	Posterior Cover	460-4-64
AK	Balance Spring	460-4-71
AL	Eye Bolt - Left	460-4-87
AM	Jam Nut 5/16-18	15-12
AN*	Umbrella Nut	18-1
AP	Left Side Rail	460-4-60
AQ	Hd. Section Tube	460-4-3
AR	Hinge Section	460-4-31
AS	Spacer Tube 4-½	460-4-14
AT	V Cross Member	460-4-19
AU	Inside Tube	460-4-18
AV	Support Disc	460-4-66
AW	Conelock Nut 1/4-20	16-5
AX	Side Rail	460-4-101
AY	Rivet 1/4 x 1-7/8	25-17
AZ	Tube Rt.	460-4-22
BA	Spring-Long	38-5
BB	Bedpan Holder Assembly	460-4-95
BC	Plastic Evertaut	38-9
BD	Nut 1/4-20 Kep	16-6
BE	Evertaut Assembly	460-4-92
BF	Swivel Ft. End	460-4-38
BJ	Posterior Ft. Board Assembly	460-4-112
BL	Shoulder Screw	8-8
BM	Foot Section U	460-4-21
BN	Roller	460-4-29
BS	Washer	11-2
BU	Cap Screw	3-23
BV	Anterior Frame Assy. (see pg. 10)	460-5-101
BW	J-Clamp	460-4-163
BX	Hinge Pin	460-4-139
BY	Ft. Section Roller	460-4-26
BZ	Tube - Left	460-4-23
CA	Spacer Tube 3-1/2	460-4-16
CB	Rivet	25-22
CC	Washer	14-2
CD	Rivet	25-27
CE	Knee U Brace	460-4-34
CF	Handle Grip	460-4-58
CG	Handle Adaptor	460-4-53
CH	Set Screw 10-32	21-12
CJ	Cam Latch Bearing	460-4-47
CK	Formed Plate Washer	460-4-40
CL	Latch Bar	460-4-56
CM	Spacer Tube 3-3/4	460-4-15
CN	Gatch Stop	460-4-44
CP	Cam Housing	460-4-51
CQ*	Cam	460-4-52
CR*	Roll Pin	26-11
CS	Eye Bolt	460-4-86
CT	Rivet 1/4 x 2	25-18
CU	Latch Spring	460-4-42
CV	Side Rail Support	460-4-4
CW	Eye Bolt	460-4-88
CX	Back U Brace	460-4-11
CY	Bolt	460-4-84
CZ	T-Screw	24-9
DA	Collar	42-1
DB	Pulley Assembly	460-4-85
DC	Shaft	460-4-45
DD	Horiz. Tie Brace	460-4-12
DE	Head Section U	460-4-2
DF	Left Support	460-4-36

LETTER	DESCRIPTION	460 PART NO.
DG	Right Support	460-4-35
DH	Posterior Swivel	460-4-37
DJ	Posterior Handle	460-4-39
DK	Side Rail - Right	460-4-59
DL	Top Ring L.H.	460-3-6
DM	Caution Sticker	460-3-34
DN	Swivel Collar 1/2	460-3-26
DP	Swivel Arm	460-3-25
DQ	Outer Tube Assembly	460-3-16
DR	Inner Tube	460-3-19
DS	Handle	460-4-57
DT	Top Ring R.H.	460-3-4
DV	Rivet 1/4 x 1-1/8	25-15
DW	Special Oval Hd. Screw	2-33
DX	Bottom Ring Left	460-3-39
DY	Machine Screw 1/4-20	4-9
DZ	Stop Spacer	460-1-37
EA	Swing Support Brace	460-3-20
EB	Outer Tube	460-3-30
EC	Cap Screw 1/4-20 x 3/4	3-2
ED	Cap Screw 5/16-18	3-11
EE	Idler Wheel Guard	460-1-50
EF	Eye Bolt 1/4-20	460-3-32
EG	Hex Nut 1/4-20 Jam	15-11
EH	Idler Drive Wheel	460-1-27
EJ	Label Sitting	460-1-65
EK	Idler Wheel Guard	460-1-51
EL	Acorn Nut 7/16-20	17-5
EM	Caster Non-Cond.	100-1-13
EN	Base Frame Assembly	460-1-1
EP	Metal Screw #4	23-1
EQ	Retaining Roller	460-1-38
ER	Retaining Bushing	460-1-41
ES	Grounding Strip	460-1-30
ET	Stop Arm	460-1-36
EU	Stop Bracket Assembly	460-1-34
EV	Label	460-1-66
EW	Cord Clamp	34-22
EX	Cord Spring	460-1-64
EY	Washer 7/16	11-16
EZ	Cap Screw 3/8-16	3-13
FA	Machine Screw 8-32	2-31
FB	Nameplate (Low Voltage)	460-2-123
FC	Nylon Washer	14-8
FD	Pillow Block	460-1-26
FE	Lock Washer - Med.	12-7
FF	Hex. Nut 3/8-16	15-6
FG	Caster Conductive	100-1-12
FH	Lock Washer 7/16	12-8
FJ	Crank	460-1-47
FK	V-Belt	460-1-45
FL	Gear Box Assembly	460-1-12
FM	Roll Pin	26-13
FN	Drive Wheel	460-1-25
FP	Decal	460-3-53
FQ	Low Voltage Control Assy.	460-2-50
FR	Shim	460-1-72
FS	Stop Bracket	460-1-32
FT	Hood Spacer	460-1-42
FU	Driveshaft Hood	460-1-44
FV	Nylatron Washer	14-10
FW	Washer	11-7
FX	Decal	460-3-52
FY	Swing-Around Anterior Support	460-3-70
FZ	Label (wt.)	460-1-80
GA	Brace	460-4-172
GB	Label (wt.)	460-622-59
GC	Motor Hood Assembly	460-1-77
GD	Ring Crossbrace	460-3-11
GE	Label - Knurled Nut	460-1-81
GF	Washer, Cushion	460-4-171
GG	Nameplate (Hazard)	460-1-82
GH	Ring Bottom R.H.	460-3-38
GJ	Caution (French)	460-3-104
GL	Hex. Cap Screw	3-5
GR	Hex. Cap Screw	3-17
GS	Rubber Bands	38-12
GT	Plastic Bag	43-10

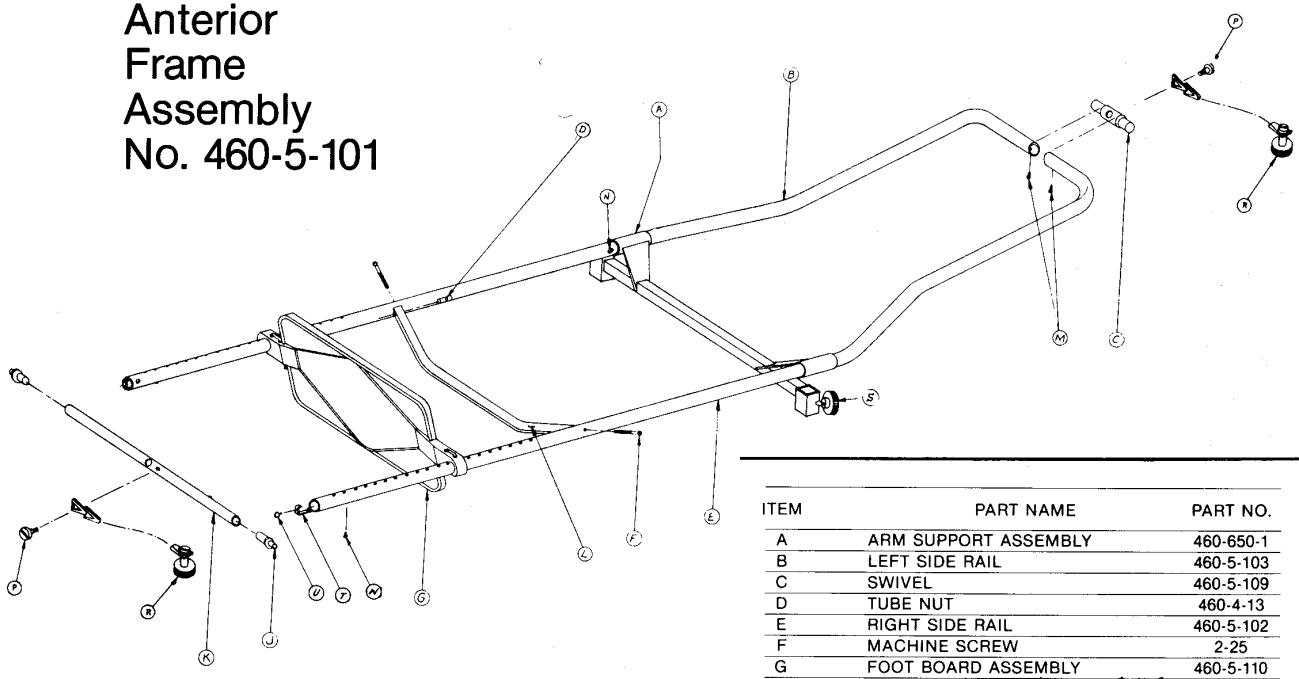
* Low Voltage Control Assembly — 460-2-50
* Replacement Low Voltage Control — 460-2-65
* Low Voltage Name Plate — 460-2-81

Automatic Anterior Support Assembly 460-3-70



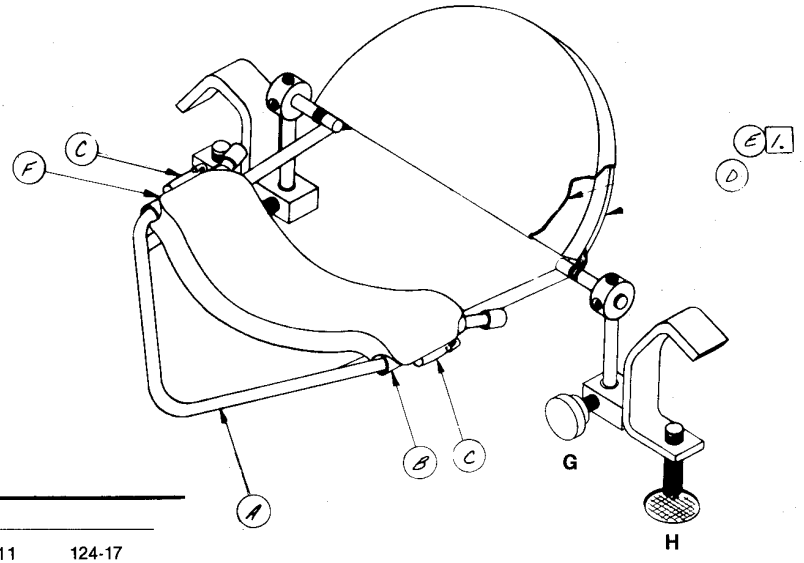
ITEM	PART NAME	PART NO.
A	LEFT LOCKING TUBE ASSY	460-3-85
B	JAM HEX NUT	15-21
C	HEX. HD. CAP SCREW (1/4 x 20 x 5/8)	3-1
D	OFFSET FRAME SUPPORT	460-3-94
E	RIGHT LOCKING TUBE ASSY	460-3-97
F	KNOB	24-11

Anterior Frame Assembly No. 460-5-101



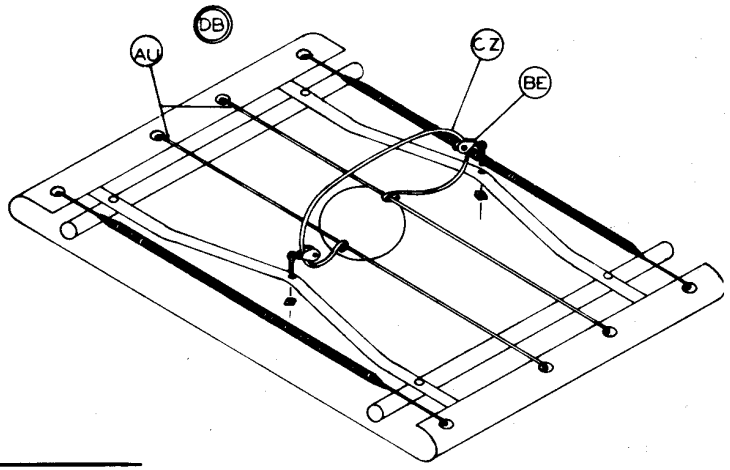
ITEM	PART NAME	PART NO.
A	ARM SUPPORT ASSEMBLY	460-650-1
B	LEFT SIDE RAIL	460-5-103
C	SWIVEL	460-5-109
D	TUBE NUT	460-4-13
E	RIGHT SIDE RAIL	460-5-102
F	MACHINE SCREW	2-25
G	FOOT BOARD ASSEMBLY	460-5-110
J	PLUG	460-5-108
K	SPREADER SWIVEL ASSEMBLY	460-5-105
L	CROSS BAR - STATIONARY	460-5-122
M	DRIVE SCREW	22-7
N	SHEET METAL SCREW	23-20
P	SHOULDER SCREW	23-7
R	CAPTIVE KNURLED NUT	460-4-165
S	KNOB	24-10
T	FLOOR STOP	460-5-134
U	RUBBER BUMPER	650-1-48
W	RD. HEAD MACHINE SCREW	2-9

Face Piece Assembly No. 124-11 (Foam) No. 124-17 (Gel)



ITEM	PART NAME	124-11 (FOAM)	124-17 (GEL)
A	FRAME ASSY	124-11-1	124-11-1
B	CHIN STRAP ASSY	124-11-25	124-17-11
C	SAFETY PIN	100-21-3	100-21-3
D	HEAD CANVAS ASSY	124-11-21	124-17-12
E	FOREHEAD STOCKINETTE ASSY	124-17-14	124-17-14
F	CHIN STOCKINETTE	124-11-29	124-11-29
G	PLASTIC KNOB	24-23	24-23
H	THUMB SCREW	24-18	24-18

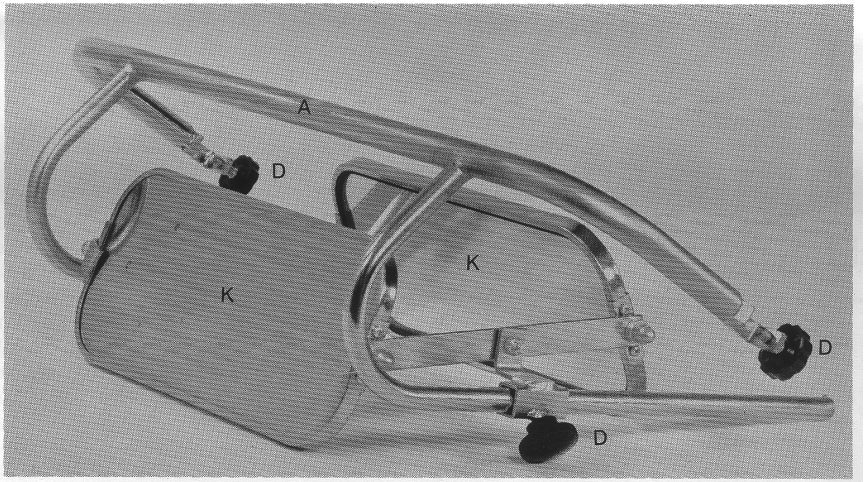
Bedpan Holder Assembly No. 460-4-95



ITEM	PART NAME	PART NO.
DB	REPLACEMENT ASSY. COMPLETE	460-4-95
AU	PLASTIC EVERTAUT	38-9
BE	PULLEY/BOLT ASSEMBLY	460-4-85
CZ	BEDPAN PLASTIC CORD	460-4-92

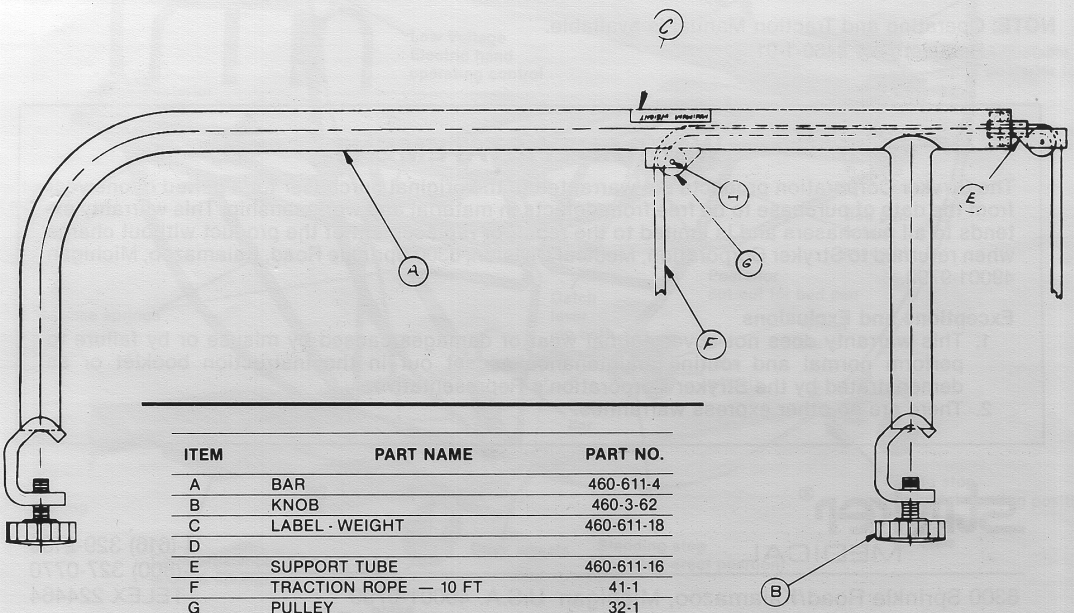
Mirror Assembly 460-643

Round Mirror (not shown) 100-19



ITEM	PART NAME	PART NO.
A	FRAME	460-643-1
B	DRIVE SCREW	22-5
C	KNOB	460-3-62
D	LARGE PLASTIC KNOB	24-11
E	SLIDING ADJUSTMENT BRACKET	460-643-5
F	FLEXLOCK NUT	16-12
G	NYLON WASHER	14-9
H	CAP SCREW	3-24
J	BRACKET	460-643-6
K	MIRROR HEAD	460-643-8

Cervical Traction Bar 460-611-19



ITEM	PART NAME	PART NO.
A	BAR	460-611-4
B	KNOB	460-3-62
C	LABEL - WEIGHT	460-611-18
D		
E	SUPPORT TUBE	460-611-16
F	TRACTION ROPE — 10 FT	41-1
G	PULLEY	32-1
H	RIVET 1/8 DIA. X 5/8	25-37

Frequently Ordered Replacement Parts

Part No.	Description
41-100	Traction Rope (100 ft.)
100-5-8	Forehead Support Band
124-11	Adjustable Facepiece (Foam Filled)
124-12	Anterior Frame & Accessory Stand
124-17	Adjustable Facepiece (Silicone Gel)
125-12	1 pc. Restraint Strap w/Seat Belt Buckle 76″ O/A
230-5	Swivel Right Angle Clamp
230-6	Wire Traction Spreader
460-1-12	Gear Box Assy.
460-1-21	Gear Box Pulley
460-1-25	Drive Wheels
460-1-27	Idler Wheels
460-1-33	Stop Bracket Assembly
460-2-20	Motor Pulley
460-2-28	Switch & Cable Assembly 115 direct drive, (6 leads)
460-2-50	Complete Low Voltage Control
460-2-54	Fuse (1 Amp)
460-2-65	Field Replacement (less motor), Low Voltage Control
460-2-74	Switch & Cable (4 leads) Low Voltage Control
460-2-88	Thermally Protected Motor 115/230/1/60 (Domestic)
460-2-102	Fuse (10 Amp)
460-3-70	Anterior Frame Support Assembly
460-4-41	Posterior Frame Assembly
460-4-70	Posterior Sheet
460-4-71	Balance Spring
460-4-72	Posterior Mattress
460-4-112	Posterior Foot Board Assembly
460-4-95	Bed Pan Holder Assy.
460-4-165	Captive Knurled Nut

Part No.	Description
460-5-100	Anterior Frame Complete
460-5-101	Anterior Frame Assembly
460-5-121	Anterior Sheet Mattress
460-5-124	Literature Pack w/wrenches
460-6-1	Balance Spring
460-27	Extra Sheet Set
460-28	Plastic Mattress Protector
460-300	Top Ring Assembly (Conversion Kit)
460-611	Cervical Traction Bar
460-612-1	36″ Traction Bar
460-613	"C" Clamp Pulley
460-614	Anterior Armsling
460-615	4″ Restraint Strap
460-615-20	8″ Restraint Strap
460-616	Plastic Side Rail Cover Set
460-618	Grasping Bar
460-619-2	S.S. Bed Pan
460-622-18	Counter Balance Assembly
460-622-19	Counter Balance Spring Only
460-622-50	Transfer Sling
460-624	Anterior Arm Support Bracket
460-632	Cervical Sit Up Attachment, Set
460-634	Elliot Ambulatory Support
460-640	Plastic Dust Cover
460-643	Mirror Assembly
460-635	Overbed Table
460-645	Anterior Cervical Traction Bar (Use W/460-646)
460-646	Offset Anterior Crossbar
460-649	2 pc. Restraint 76″ O/A (with Seat Belt Buckle)
800	Head Halter Collar Comb
801-2	Spreader Bar (Use W/800)

NOTE: Operating and Traction Manual is available. Request part #460-1-91

WARRANTY STATEMENT

The Stryker Corporation products are warranted to the original purchaser for a period of one year from the date of purchase to be free from defects in material and workmanship. This warranty extends to all purchasers and is limited to the repair or replacement of the product without charge when returned to Stryker Corporation, Medical Division, 6300 Sprinkle Road, Kalamazoo, Michigan 49001-9799.

Exceptions and Exclusions

1. This warranty does not cover normal wear or damages caused by misuse or by failure to perform normal and routine maintenance as set out in the instruction booklet or as demonstrated by the Stryker Corporation's Representative.
2. There are no other express warranties.

stryker® MEDICAL

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